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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,612	08/15/2001	Ian C. Williams	008A.0001.U1(US)	1604
29683 7590 01/16/2009 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE, Suite 202 SHELTON, CT 06484-6212				
EXAMINER				
POPHAM, JEFFREY D				
ART UNIT		PAPER NUMBER		
2437				
MAIL DATE		DELIVERY MODE		
01/16/2009		PAPER		

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte IAN C. WILLIAMS

Appeal 2008-2670
Application 09/930,612
Technology Center 2400

Decided: January 15, 2009

Before JOSEPH L. DIXON, JEAN R. HOMERE, and JAY P. LUCAS,
Administrative Patent Judges.

DIXON, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

A Patent Examiner rejected claims 1, 102-119, 125-161, 175-178, and 180-186. The Appellant appeals therefrom under 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b).

A. INVENTION

The invention at issue on appeal relates to an apparatus, system, method and computer program for enhancing the security of information within a communications network. In particular, to improving the security of sensitive information such as credit card details for an electronic commerce environment using an open network such as the Internet. (Spec. 1.)

B. ILLUSTRATIVE CLAIM

Claim 1, which further illustrates the invention, follows.

1. A data processing system, comprising:

a first processing resource in the form of a web server coupleable to an open communications network; and

a second processing resource in the form of a back end server coupleable to said first processing resource;

said first processing resource and said second processing resource being configured to establish a communications relationship between them through a non- network connected communications channel, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

C. REFERENCES

The Examiner relies on the following references as evidence:

Willmann	US 5,521,923	May 28, 1996
Tanaka	US 5,539,909	Jul. 23, 1996

Raanan	US 6,311,278 B1	Oct. 30, 2001 (filed Sep. 9, 1998)
Piccioni	US 6,842,774 B1	Jan. 11, 2005 (filed Jun. 9, 2000)

RFC791, *Internet Protocol*, DARPA Internet Program Protocol Specification, (1981), available at <http://rfc.net/rfc791.html>.

OSTA, *The Benefits of Writable Optical Storage*, (1999), available at <http://web.archive.org/web/20000510215932/www.osta.org/html/benefits.html>. 1-4.

D. REJECTIONS

The Examiner rejects the claims in this appeal as follows:

Claims 1, 102-105, 108, 109, 111, 125, 127, 132-135, 137-144, 148, 149, 151, 158, 175-177, 180, 181, 183, and 186 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Raanan.

Claims 106, 136, and 145 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raanan in view of Piccioni.

Claims 107, 146, and 147 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raanan in view of Tanaka.

Claims 110, 112-119, 126, 128-131, 150, 152-157, and 159 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raanan in view of Willmann.

Claims 160, 161, 184, and 185 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raanan in view of Willmann, further in view of RFC791 ("Internet Protocol, DARPA Internet Program Protocol Specification", 9/1981, obtained from <http://rfc.net/rfc791.html>).

Claims 178 and 182 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raanan in view of OSTA (OSTA, "The Benefits of

Writable Optical Storage", 2/25/1999, pp. 1-4, obtained from <http://web.archive.org/web/20000510215932/www.osta.org/html/benefits.html>).

ISSUES

Has Appellant shown error in the Examiner's initial showing of anticipation? Has Appellant shown error in the Examiner's initial showing of obviousness?

PRINCIPLES OF LAW

35 U.S.C. § 102

"[A]nticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim" *In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) (citing *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1457 (Fed. Cir. 1984)). "[A]bsence from the reference of any claimed element negates anticipation." *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571 (Fed. Cir. 1986).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as

it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

Appellant has the opportunity on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

In rejecting claims under 35 U.S.C. § 102, "[a] single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation." *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375-76 (Fed. Cir. 2005) (citation omitted).

35 U.S.C. § 103(a)

Section 103 forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1734 (2007).

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *Id.* at 1739, and discussed circumstances in which a patent might be determined to be obvious. *KSR*, 127 S. Ct. at 1739 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966)). The Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* The operative question in this "functional

approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 1740.

The Federal Circuit recently recognized that "[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (citing *KSR*, 127 S. Ct. 1727, 1739 (2007)). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." *Id.* at 1162 (citing *KSR*, 127 S. Ct. at 1740-41).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

ANALYSIS

With respect to independent claim 1, we agree with the Examiner's claim interpretation at page 25 of the Answer wherein the Examiner notes that the plain language of "non-network connected communications channel" is an "oxymoron." Here, we note that a network may be as broad as the interconnection of two computers(servers). Therefore, Appellant's non-network channel appears to be self-contradictory wherein the two servers connected necessarily define a network. Thus, we will broadly, but reasonably interpret the claimed invention. We note the claim does not

recite any specific context for the first processing resource or the second processing resource beyond a web server and back end server coupled and that there is a "non-network connected communications channel."

Here, the Examiner has relied upon the teachings of Figure 2 and Figure 3 of Raanan to teach a client 12 request to a filter 14 which would be the first processing resource as a Web server coupleable to an open communication network and a second processing backend server 10. The security filter 14 is shown in Figure 3 to be made up of two separate and distinct processing entities an external robot 26 and an internal robot 24 coupled together via a "dedicated secure communication bus 28." (Answer 4 and 25-26). Therefore, the external robot 26 is coupled both to the backend server 10 and a secure channel 28.

Interpreting the claimed "non-network communications channel" in light of Appellant's disclosure, we note that pages 15-16 of Appellant's Specification describes Figure 3 wherein channel 50 is identified as a

dedicated communications channel ... [p]referably, communications channel 50 is a non-network connected communications channel. In the present example, the dedicated communications channel is a serial line, but may be a parallel connection. The communications channel 50 may comprise a twisted pair, optical fibre or wireless link, for example, and other suitable communications channels may be provided.

Additionally, Appellant described communications channel 58 as "a private or dedicated . . . channel[s],... may be any suitable form of communications channel, such as described above in relation to communications channel 50." (Spec., 16, ll. 24-27). Additionally, Appellant's Figure 11 discloses a "serial link 50" at page 30, line 12, of the Specification. Therefore, we find that

Appellant has not identified a specific definition in the Specification for the claim terminology "non-network connected communications channel."

Appellant argues at pages 2-5 of the Reply Brief that there are structural differences between the claimed subject matter and the cited reference to Raanan. Appellant argues that the gateway 14/14a of Raanan is not a server as defined in McGraw-Hill dictionary since a gateway is defined in the McGraw-Hill dictionary as a "point of entry and exit" Here, we disagree with Appellant's narrow interpretation of the teachings of Raanan. At pages 6-7 of the Reply Brief, Appellant identifies that Raanan identifies US Patent to Reshef (6,321,337), and that Reshef also does not disclose at least one of the servers required by independent claim 1. We disagree with Appellant. We find that at column 13 of the Reshef reference teaches that the outgoing communications from the internal robot 24 are discussed, and Reshef identifies that Web server 13 can also be called a "gateway" in ll. 37-38 and relaying the data to the "gateway (web-server)" is discussed at l. 38. Therefore, Appellant's narrow reading of the teachings of Raanan is not persuasive of error in the Examiner's initial showing of anticipation.

Furthermore, Appellant has not identified any express definitions in Appellant's originally filed Specification with which to interpret the present claimed invention. Therefore, we give these terms of the claimed invention their ordinary and customary meaning. Here, we find the Examiner's interpretation to be reasonable in light of the broad teachings in Appellant's Specification. Therefore, we find that Appellant has not shown error in the Examiner's interpretation of the teachings of Raanan.

Furthermore, we find that many structural elements in a processor-based communication system may be given different labels for different

functions in the various transmission, reception, and routing steps depending on the specific function being carried out at a specific point in time. Therefore, we find the Examiner's interpretation of the teachings of Raanan to be reasonable. Here, we find no specific field of use or specific functionality recited in the language of independent claim 1 to put the claim into a specific context rather than the generalized "data processing system" of independent claim 1. Therefore, we find Appellant's argument to be unpersuasive of error in the Examiner's initial showing of anticipation.

Appellant's second contention is whether Raanan discloses "said first processing resource and said second processing resource being configured to establish a communications relationship between them through a **non-network connected communication channel**." (App. Br. 7-12). While Appellant does not admit that the "dedicated, secure communication bus 28" of Raanan is "a non-network connected communication channel," Appellant relies upon the above discussed distinction with the first and second processing resources being servers. (Reply Br. 7-9). As discussed above, we find Appellant's argument unpersuasive with regard to the first and second processing resources being servers since we find the Gateway of Raanan to be a "server," as claimed.

At pages 9-11 of the Reply Brief, Appellant attempts to differentiate between the teachings of Raanan and independent claim 1 with regards to protocols. We do not find Appellant's distinctions to be relevant to the claimed invention since no specific network-protocol-based limitations are expressly recited in the language of independent claim 1. Therefore, Appellant's arguments to unclaimed subject matter are not persuasive of error in the Examiner's initial showing of anticipation.

With respect to representative dependent claim 108, Appellant argues that Appellant cannot find in Raanan disclosure of the subject matter in claim 108. (App. Br. 14). The Examiner clarifies that the command is the name of the procedure performed by the application/program. Therefore, we find Appellant's argument does not to show error in the Examiner's initial showing of anticipation.

With respect to representative dependent claim 109, Appellant argues that there does not appear to be any reply message in Raanan. The Examiner maintains that the combination of rejections in parent claim 102 with the discussion with regards to dependent claim 109 at pages 27-28 of the Answer teaches that if a request is allowable, the filter module 14 passes the request along to the server, showing that the instructions satisfied the predetermined criterion. We agree with the Examiner's interpretation and find Appellant's argument unpersuasive of error in the Examiner's initial showing of anticipation.

With respect to dependent claim 158, Appellant argues that the cited portions of Raanan does not disclose including sensitive information in the message. (App. Br. 17-18). At page 28 of the Answer, the Examiner maintains that "any data sent from a client can be considered sensitive." We agree with the Examiner's line of reasoning and find that the offer definition for sensitive information in the Specification on page 8 to be merely exemplary and not a restrictive definition. Therefore, we find Appellant's argument to be unpersuasive of error in the Examiner's initial showing of anticipation, and we will sustain the rejection of dependent claim 158.

With respect to representative dependent claim 183, Appellant argues that Appellant can find no disclosure in case that of a command code that

allows commands to be transmitted from the second processing resource to the first processing resource. (App. Br. 18). The Examiner maintains that column 3 of Raanan teaches parsing messages to identify commands, fields, or other user selectable options contained in the message. The Examiner maintains that this teaches that the gateway receives commands from the server. We agree with the Examiner's interpretation and further find that the singular mode is merely a label without further functionality or multiple modes being recited. Therefore, we agree with the Examiner's interpretation and find Appellant's argument unpersuasive of error in the Examiner's initial showing of anticipation, and we will sustain the rejection of representative dependent claim 183 and dependent claim 186 grouped therewith by Appellant.

With respect to dependent claim 106 (Issue B), Appellant argues that there is no reason in Raanan for server 10 to send a failure message from server 10 to the protocol extraction module 18 since protocol extraction module 18 intercepts those messages. (App. Br. 19-20). Here, Appellant merely argues the claim language with respect to Raanan alone. Here, the rejection is over the combination and not merely Raanan alone. Therefore, we do not find Appellant's argument persuasive of the error in the combination of Raanan and Piccioni.

At pages 11-12 of the Reply Brief, Appellant contends, with respect to independent (sic, dependent) claim 106, that the teachings of Piccioni with respect to a failure message when a subscriber has no access to a requested page does not teach or suggest the claimed transmission of an "instruction fail message to the first processing resource...." We disagree with Appellant, and find that the teaching of providing a failure notice with respect to any

action would have fairly suggested a failure notice of the instructions as taught in by Raanan. Therefore, we sustain the rejection of representative claim 106 and claims 136 and 145 group therewith by Appellant.

With respect to representative dependent claim 107 (Issue C), Appellant argues that the Examiner has reversed the application of the prior art teachings to the claimed intention from independent claim 1. (App. Br. 20-22). The Examiner, at pages 30-31 of the Answer, clarifies that the application of the prior art has not been reversed and that the gateway would include the database of allowable functionality. We agree with the application and clarification of the prior art. Therefore, we do not find Appellant's argument persuasive of error in the Examiner's initial showing of obviousness of representative claim 107 and claim 146 grouped therewith by Appellant.

With respect to dependent claim 147, Appellant merely reiterates the language of claims 146 and 147, and again asserts the Examiner has reversed the application of the prior art from claim 1. (App. Br. 22-23). As discussed above, we do not find Appellant's argument persuasive of the error in the Examiner's initial showing of obviousness.

With respect to representative claim 110 (Issue D), Appellant argues that Raanan does not teach a queue and that there is no motivation to combine the teachings of Willmann with Raanan. We disagree with Appellant, and find that the Examiner has set forth a reasoned motivation statement at page 13 of the Answer. Appellant's assertion that there is no motivation does not show error in the Examiner's stated motivation and does not show error in the initial showing of obviousness. Therefore, we will

sustain the rejection of representative dependent claim 110 and those claims grouped therewith by Appellant.

With respect to representative dependent claim 113, Appellant argues that Appellant's Specification discloses an "action code" at pages 8 and 20 and that the priority of Willmann is not an "action code." We disagree with Appellant's interpretation and find that the cited portions of the Specification are not expressed definitions of the claim terminology. Therefore, we find Appellant's argument unpersuasive of error in the Examiner's initial showing of obviousness. Therefore, we sustain the rejection of representative claim 113 and those claims grouped therewith by Appellant.

With respect to representative dependent claim 114, Appellant relies upon the same argument as advanced with respect to claims 110 and 113, which we found unpersuasive of error. Therefore, we sustain the rejection of dependent claim 114 and dependent claim 129 grouped therewith by Appellant.

With respect to representative claim 117, Appellant, again, looks to rely upon the Specification to interpret "sensitive information" (App. Br. 25-26), but again, we do not find that the Specification defines "sensitive information." Therefore, Appellant's reliance thereon is unpersuasive of error in the Examiner's initial showing of obviousness. Therefore, we sustain the rejection of dependent claim 117 and dependent claims grouped therewith by Appellant.

With respect to dependent claim 131, Appellant argues that Willmann deletes the entire packet and that there is no disclosure or implication to discard the sensitive information by "remov[ing] at least that part of said communication comprising said sensitive information from said first

processing resource." (App. Br. 26-27). We disagree with Appellant and find that the open language of dependent claim 131 is met by the deletion of the packet since the "at least..." limitation has been met. Therefore, Appellant's reliance thereon is unpersuasive of error in the Examiner's initial showing of obviousness. Therefore, we sustain the rejection of dependent claim 131.

With respect to representative claim 160 (Issue E), Appellant relies upon prior arguments which were found unpersuasive and Appellant's argue that the RFC791 reference is inapplicable to a processing resource to discard sensitive information. Appellant provides no additional line of reasoning to support the above contention. Therefore, Appellant's reliance thereon is unpersuasive of error in the Examiner's initial showing of obviousness. Therefore, we sustain the rejection of representative dependent claim 160 and dependent claims grouped therewith by Appellant.

With respect to representative dependent claim 178 (Issue F), Appellant relies upon the arguments advanced with respect to independent claims 175 and 180 which we found unpersuasive of error in the Examiner's initial showing.

CONCLUSION

For the aforementioned reasons, Appellant has not shown error in the Examiner's initial showing of anticipation and obviousness.

ORDER

We affirm the anticipation rejection of claims 1, 102-105, 108, 109, 111, 125, 127, 132-135, 137-144, 148, 149, 151, 158, 175-177, 180, 181, 183, and 186 and the obviousness rejections of claims 106, 107, 110, 112-

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119, 126, 128-131, 136, 145-147, 150, 152-157, 159-161, 178, 182, 184, and
185.

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

rwk

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